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ABSTRACT

It is viable to argue that literacy can be construed as a set of culturally-based discursive practices rather than as merely a set of cognitive skills. This idea has special relevance for students with learning disabilities, who often struggle with more traditional, individually-based curricular approaches. This study explored the ways in which an experienced second-grade teacher engaged students formally assessed as "learning disabled" in the collaborative editing of a written text. Analyses suggest that one group of teacher utterances served to orchestrate students' participation in the repair of the text while a second group of utterances seemed to guide the level at which students were considering the text. Regarding the latter, the teacher's comments seemed intended to push students toward either one of two ways of thinking. Some comments encouraged them to clarify the conceptual meaning of the text (e.g., "What does that mean?"), while others asked them to consider the grammatical/syntactic structure of the text itself (e.g., "So, how should we say it?"). As a group, collaborative editing appears to have allowed these students to perform at levels well beyond those at which they typically perform individually. These data demonstrate one way that teachers can socialize students, especially those who are academically challenged, into the collaborative creation and revision of texts. Contains 39 references and 2 tables and 5 figures of data; an appendix contains the full transcript of a round of collaborative editing. (RS)

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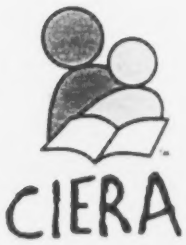
CIERA Inquiry 1: Readers and Texts
How do a teacher's questions and comments support the literacy development of children who have been classified as learning disabled? How can children's existing knowledge and classroom environments enhance the factors that make for success?

It is viable to argue that literacy can be construed as a set of culturally-based discursive practices rather than as merely a set of cognitive skills. This idea has special relevance for students with learning disabilities, who often struggle with more traditional, individually-based curricular approaches. This study explored the ways in which an experienced teacher engaged students formally assessed as "learning disabled" in the collaborative editing of a written text. Analyses suggest that one group of teacher utterances served to orchestrate students' participation in the repair of the text while a second group of utterances seemed to guide the level at which students were considering the text. Regarding the latter, the teacher's comments seemed intended to push students toward either one of two ways of thinking. Some comments encouraged them to clarify the conceptual meaning of the text (e.g., "What does that mean?"), while others asked them to consider the grammatical/syntactic structure of the text itself (e.g., "So, how should we say it?"). As a group, collaborative editing appears to have allowed these students to perform at levels well beyond those at which they typically perform individually. These data demonstrate one way that teachers can socialize students, especially those who are academically challenged, into the collaborative creation and revision of texts.



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Orchestrating the Thought and Learning of Struggling Writers

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This study sought to better understand the ways in which an experienced teacher engaged students formally assessed as "learning disabled" in the collaborative creation and revision of written text. To accomplish this, we analyzed, described, and assessed the effects of her communications within the context of a group writing activity with six elementary students (second grade). This teacher's style had developed over eight years of participation in a joint project between teachers and researchers to develop an integrated literacy curriculum. The curriculum (explained subsequently) sought to improve the literacy performance of young readers and writers in special education by immersing them in processes of reading, writing, speaking, and listening. This particular activity, *collaborative editing*, seemed especially helpful in moving students toward a more finished final product, in this case an expository report about reptiles.

For this purpose, we relied on three principal sources of data. First, a textual analysis of the focal student's writing compared independently versus collaboratively produced texts as well as specified the actual changes made to the text during the collaborative editing activity. The results allow us to argue that something facilitative indeed seemed to have occurred within the activity itself. Second, discourse analysis of one segment of the activity attempted to identify the function of various teacher comments within the group process. From this, we were able to develop a broader typology of teacher "moves" based on their apparent purpose or function within the group. Third, we conducted a subsequent interview with the teacher as she viewed a videotape of the activity. The interview provided a degree of validation for our previously developed categories by providing insights into the intentions behind her various pedagogical moves.

We begin by discussing our view of literacy and the special problems that reading and writing presents for those recognized as "learning disabled." This is followed by a review of the study's background, including (a) the larger project in which this study is embedded; (b) the participants; (c) our data sources, and; (d) the collaborative editing activity. Then, after presenting our methods of analysis, we analyze and interpret the results. This is followed by a discussion of their various implications and, finally, a brief summary.

The Nature of Literacy

The consequences of learning or not learning to write can be quite personal. In schools, writing activities remain central to the construction of students' literate identities, continually positioning them as either competent or incompetent, helper or person-in-need-of-help, worthy or unworthy, teacher or learner. Paradoxically, however, although school is presumed to be the place where we become literate, to some extent it is only students' preexisting competency with written language and their ability to use it in age-appropriate ways that affords them entry into school-based practices. This creates a dilemma for students with learning disabilities. Performance deficiencies mean that the academic identities of such students may be negatively defined both by self (through processes of social comparison), and by institution (for more pragmatic reasons) relative to their non-learning-disabled peers. Covington (1992) has demonstrated how students' need to avoid being perceived as academically inadequate by self and others is a powerful motivator of a wide range of self-defeating learning behaviors. For this reason, students with learning disabilities are at a decided disadvantage for acquiring views of themselves as legitimate writers and authors, more often identified by their *dis*abilities and deficiencies than their competencies.

Such a "deficit model" (Valencia, 1997) only begins to change as we move away from a view of writing as an autonomous, individually acquired skill toward a view in which the creation of texts is considered a culturally bound, dynamic, meaning-making practice. This is a view in which literacy is seen as a fundamentally social process rather than as a collection of cognitive skills (Bakhtin, 1981; Kozulin, 1986, p. xxxiv; Lemke, 1989; Vygotsky, 1986; Street, 1988). This view, especially as expanded by recent social constructionists (e.g., Gee, 1992; Harre & Gillette, 1994; Shotter, 1993), trades a cognitivist view of literacy (i.e., the belief that the essence of literacy is the acquisition of cognitive skills) for a sociocultural view that construes literacy as a collection of fundamentally *social* activities into which one is enculturated. In this sense, literacy practices and their meanings are always under the shaping influence of a particular context; reading and writing both embody and transform particular ways of thinking, acting, and knowing within specific communities (Gee, 1992).

Since discourse is perhaps the most conspicuous feature of school life (Cazden, 1988), particularly discourse in the service of promoting more abstract forms of thought, the notion of literacy as a set of social practices has important implications for learning in schools. First, it suggests that learning typically involves the "apprenticeship" of individuals to more knowledgeable others such as teachers or peers (Rogoff, 1990). Second, it considers the dialogic quality of the interactions that further students' literacy acquisition and use. That is to say, it takes seriously the idea that teachers interact with students and students interact with teachers and/or peers in ways that mutually influence one another. Finally, a view of literacy as social practice assumes that as students begin to develop the communicative competency vital to their participation in various types of educative contexts, they are not simply "acquiring" a skill, they are learning how to construct and articulate their identities. For such reasons, it is critical that researchers

continue examining the processes through which children do (or do not) appropriate the literacy practices of their surroundings.

Background

Learning Environments for Accelerated Progress (LEAP)

This study was part of a larger ongoing study, Learning Environments for Accelerated Progress (LEAP). LEAP involves collaboration between university researchers and seven elementary teachers participating in the development, implementation, and evaluation of an integrated curricular approach. The approach is designed to teach the self-regulated use of comprehension and composition skills and strategies in classrooms with primary-grade students with mild disabilities (Englert, Garmon, Mariage, Rozendal, Tarrant, & Urba, 1995). The pedagogical principles of the project are based on a sociocultural view of teaching and learning. These principles are to: "(a) embed instruction in meaningful and contextualized activities, (b) emphasize students' membership in communities, (c) provide social and dialogic interactions that support students' performance in their zones of proximal development, and (d) teach strategies for self-regulated learning and for participation in knowledge-creating communities" (Englert & Mariage, 1996, p. 157).

Student Population

Six male second graders in an elementary resource room participated in the editing activity. While the school itself is located in a predominantly middle-class neighborhood, approximately 50% of its students are bused in from two low-income urban areas. One student in this activity was African American, one was Hispanic, and the remaining four were Caucasian. All six were formally diagnosed with learning disorders.

Sources of Data

There are three sources of data for this study. We first examined writing produced by our focal student (Ryan) under three conditions: (a) a text that was produced in unsupported and spontaneous writing conditions (journal writing), (b) a text that was produced with the support of a graphic (a "semantic web" or "concept map"), and (c) a revised text that resulted from the collaborative efforts of a small group of students. We compared the quality of text that Ryan was able to produce individually with the quality of text he was able to produce through the teacher-orchestrated group process. The results of this comparison argue that the group editing activity made an important difference in the nature of text Ryan was able to produce.

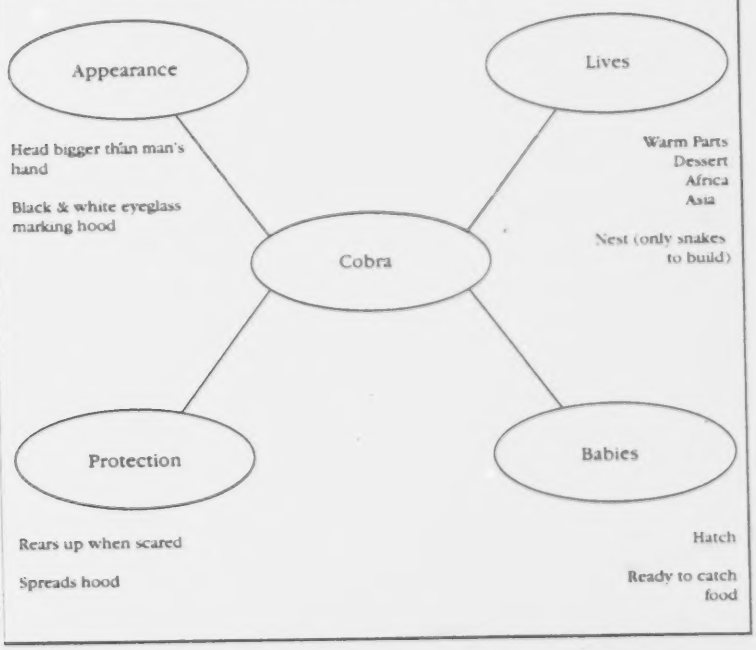
Next, we carried out a discourse analysis of the group process surrounding the revision of Ryan's report. In brief, discourse analysis is an analytic approach that focuses on "what persons *do* with their talk" (Potter, 1995, p. 81; see also Baynham, 1995; Coulthard, 1977). It emphasizes the way people use language to achieve social or interpersonal goals. A particular focus for this analysis was the nature of the teacher's comments or pedagogical "moves," the purpose being to learn more about how she facilitated the type of group process underlying the revision of Ryan's report.

Finally, we conducted and transcribed a "viewing session" (Erickson & Schultz, 1991) in which the teacher viewed and commented on a videotape of the collaborative editing event. In addition to offering further insights into the teacher's subjective reactions, thoughts, and motives regarding her various pedagogical moves, these self-reports provided further validation for the results of our discourse analysis.

Collaborative Editing

This activity involved helping learning disabled students to collaboratively edit an expository text. As part of a theme unit on reptiles, teacher and students collaborated in editing the reptile reports of individual students. For this activity, five students sat across from the teacher around a half-moon table while the author was seated by her side. The focal student chosen for this study was Ryan, whose text was the first to be edited by the group. Since this was the first attempt by both teacher and students at this particular activity, we believed that Ryan's segment, before this activity had become routinized for both teacher and students, would be characterized by the greatest amount of social ambiguity and thus provide the greatest amount of information regarding how teacher might go about attempting to structure it. This follows Harré and Van Langenhove (1991), who claim that it is in the initial encounter with new and unfamiliar situations that roles, rules, and expectations between participants are most "open" or negotiable.

Figure 1: A Facsimile of Ryan's Concept Map



It is important to note that students in this classroom regularly engaged in activities informed by a sociocultural perspective. Thus, although this was the first time this particular activity was attempted, there are implicit principles which pervade it that are carried over from other activities (see Englert & Mariage, 1996). For example, it is natural for students to presume that an editing task will involve collaborative effort.

The context was a thematic unit in which the teacher sought to introduce students to reading and writing within a scientific genre. Throughout the year, the teacher involved students in collaborative report-writing that involved brainstorming, mapping ideas, partner-writing, editing, and publishing written reports. However, collaborative editing took place at the end of the year when she expected her students to have developed greater independence in writing their individual reports. Prior to this activity, each student had been asked to select a personal topic for a topical unit about reptiles and then individually a the report, presumably applying skills learned throughout the year.

Figure 2: Ryan's Cobra Story

Ryan's Initial Draft of the Cobra Story

The cobra live in the desert. They live there in Asia. They live Africa. They like warm parts of world.
A cobra is longest and a bee. It rears up when scared. When angry spreads hood. They hatch out of egg. Cobra babies ready to catch food. The cobra only snakes to build nest. Cobra look nice. His heads bigger than a mans hand. Black and white eyeglass marking hood.

The Breakdowns in Ryan's Cobra Story

The cobra live [subj.-verb agreement] in the desert. They live there in Asia. They live [preposition "in"] Africa. They like warm parts of ["the" article] world. A cobra is longest [compared to what?] and a bee [?]. It rears up when scared. When angry ["it" - subject] spreads hood. They hatch out of egg [plural?]. Cobra babies [verb? —are] ready to catch food. The cobra [verb? —are] ["the" article] only snakes to build ["a"] nest. Cobra [subj.-verb agreement] look nice. His heads bigger than a mans hand [possessive - "man's"]. Black and white eyeglass marking hood. [intended meaning unclear]

Collaboratively-Edited Version of Ryan's Cobra Story

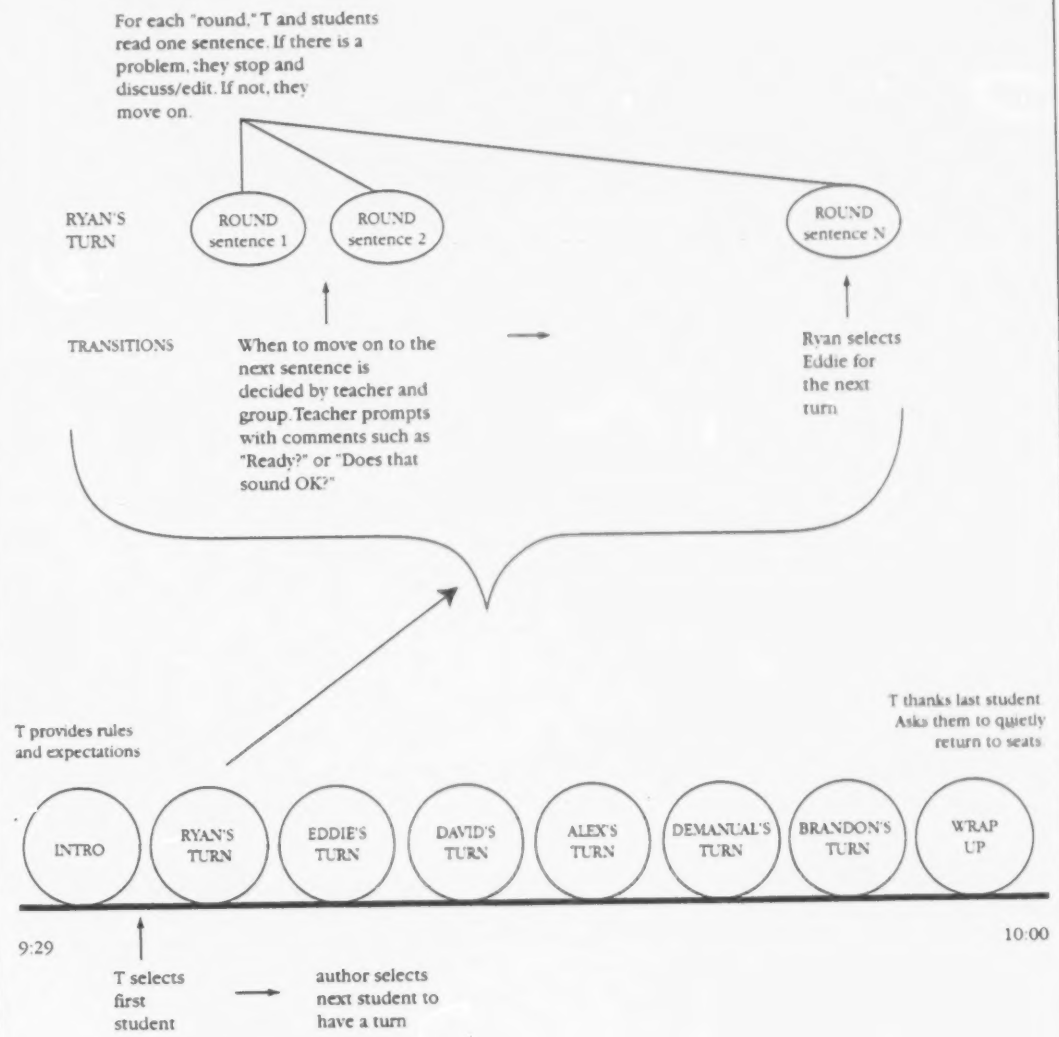
The cobra lives in the desert. They live there in Asia. They live in Africa. They like warm parts of the world. A cobra is long. It rears up when it is scared. When the cobra is angry it spreads hood *[sic]*. They hatch forty eggs. The cobra babies are ready to catch food. The cobras are the only snakes that know how to build a nest. The cobras look nice. The heads *[sic]* bigger than a mans *[sic]* hand. It has black and white eyeglass markings in the front of its hood.

In general, expository writing requires students to become familiar with the "language of science" (Halliday & Martin, 1993) and to develop and revise texts distinguishable from more narrative or spontaneous forms of writing. Ryan's report had been developed over a period of several weeks prior to the collaborative editing task. The teacher had initiated this process by asking students to brainstorm ideas for a particular topic. Students' knowledge was then expanded through individual research. To help students structure their subsequent texts, the teacher engaged them in classifying their ideas into categories. These were represented in a concept map constructed by each student. A central topic appeared in the center of each map; "cobra" in Ryan's case (see Figure 1). Branching out from the centre, students listed subcategories representing the qualities and characteristics of their chosen reptile, such as where it lived, how it protected itself, care of babies, appearance, and so forth. Each of these subcategories was then expanded upon by students during the research phase. Pragmatically, the map served as a visual "scaffold" for the students' eventual writing of their texts.

Next, students developed a rough draft of their reports incorporating the conceptual structure of their mapped ideas. As much as possible, students were expected to transform their ideas into an exposition containing introductions to the subcategories, providing relevant details for each subcategory, and summarizing the text (Halliday & Martin, 1993). These initial drafts

were then typed by the teacher. The text of Ryan's draft is shown in the top of Figure 2.

Figure 3: Timeline*


For each "round," T and students read one sentence. If there is a problem, they stop and discuss/edit. If not, they move on.
RYAN'S TURN
ROUND sentence 1
ROUND sentence 2
ROUND sentence N
TRANSITIONS
When to move on to the next sentence is decided by teacher and group. Teacher prompts with comments such as "Ready?" or "Does that sound OK?"
Ryan selects Eddie for the next turn
T provides rules and expectations
T thanks last student. Asks them to quietly return to seats
INTRO
RYAN'S TURN
EDDIE'S TURN
DAVID'S TURN
ALEX'S TURN
DEMANUAL'S TURN
BRANDON'S TURN
WRAP UP
9:29
10:00
T selects first student
author selects next student to have a turn

*EXPLANATION OF FIGURE: This figure diagrams the structure of the entire collaborative editing session (lower part of the figure) as well as the structure of each student's "turn" (upper part of the figure). Each student has a turn to have their report edited by the group (lower part). Within each student's turn, the teacher reads one sentence at a time and the group edits that particular sentence (upper part). The discourse around each on of these sentences is being called a "round."

Finally, the teacher brought the group together for the collaborative editing activity. As a group, the students and teacher worked toward grammatically correct sentences representing statements about a particular species of reptile. The activity was structured so that students were each given a turn to

edit their reports with help from their classmates. Turns consisted of a series of "rounds." A round was comprised of the teacher's reading of a sentence of text followed by group discussion of that sentence. Discussion of a sentence continued until consensus was reached regarding its suitability. The structure of the activity is diagrammed in Figure 3.

Method

We first performed an analysis of the writing produced by Ryan under three conditions: (a) independent texts written during journal time, (b) the initial draft produced with the help of the concept map, and (c) the revised draft produced in the collaborative editing activity. We were particularly interested in exploring any contrasts between the texts Ryan produced individually versus those produced in the collaborative setting.

We then carried out a discourse analysis (Coulthard, 1977; Potter, 1995) of the activity itself. Although the study of writing has typically occurred within a cognitive or psychological framework (e.g., Bereiter & Scardamalia, 1987), this perspective tends to construe the student as a solitary writer creating texts for an equally solitary reader. Instead, by closely analyzing the talk within a literacy activity, discourse analysis allows one to study the ways in the construction of a text is collectively achieved (e.g., Dyson, 1993). To analyze the nature of teacher moves, we transcribed and analyzed a videotape of Ryan's turn. The teacher's statements were then categorized based upon their social function. These categories were subsequently cross-checked with an experienced third rater.

Finally, we conducted a subsequent viewing session (see Erickson & Shultz, 1991) in which the teacher herself viewed the videotape of Ryan's turn. The videotape served as a prompt for specific thoughts and reflections on the activity. An audio tape of the viewing session itself was then transcribed and analyzed. This was especially helpful in gathering insight into the specific motivations or rationales beneath the teacher's various pedagogical interventions. In addition, the teachers' feedback provided a cross-check for the results of our discourse analysis.

Results and Analysis

Textual Analysis

Independent Journaling. Two weeks prior to Ryan's snake draft, he wrote the following in his journal.

I'm cool My cat is co /[l].
My dog is coo[l]
My fish is coo[l]
My trc [truck] is coo[l]

My tru [turtle] is cou [cool]
My gas is cuu [cool].

Ryan's text generation strategy in this context seems simple: he repeats a phrase (My _____ is cool) with variations in the subject position. He recalls information in an associative stream of thought (see Scardamalia & Bereiter, 1984). The development of his ideas through the provision of the details which might explain or support subtopics (e.g., cat, dog, fish) is absent. At the same time, one could propose that this entry represents a certain written genre: the list (e.g., grocery list, to-do list, laundry list, and so on). As such, it might reflect Ryan's efforts to emulate a perceived quality of formal written texts.

Draft of Expository Report. In the text shown at the top of Figure 2, we see Ryan's initial draft of the cobra story. In spite of grammatical errors and some semantic ambiguity, it is clear that the concept map has afforded Ryan a certain level of ability to structure a written text. Ryan supports each of his subtopics (where the cobra lives, what it does, care of the young, appearance of the cobra) with no fewer than 2-4 relevant details (e.g., "The cobra live in the desert. They live there in Asia. They live Africa. They like warm parts of world"). One can see a substantial difference between the individually produced journal entry and this expository text. The conceptual map has apparently provided a useful tool in moving Ryan toward a textual genre he might not have obtained otherwise.

Nonetheless, the draft contains problems, as shown in the middle text of Figure 2. We focus on two interrelated issues. The first has to do with the technical expression of ideas. Halliday and Martin (1993) maintain that the process of writing science texts involves students in a form of writing requiring a different grammar than their familiar oral speech. It involves a unique way of knowing and talking about the world. Science is a technical language requiring a high degree of grammatical and logical complexity—partly owing to the fact that, to some extent, the meaning of such texts is presumed to be generalizable, representing facts independent of the local contexts in which they were produced (Halliday & Martin, 1993). Ryan, for example, has some grammatical/syntactical difficulty constructing facts as they relate to agents (one omission of subject, e.g., "it"), the signaling of attributes or states (two omissions of verbs indicating state, e.g., "are"), and the signaling of circumstances (one omission of preposition indicating location, (e.g., "in"). This suggests that Ryan is still in the process of acquiring the linguistic tools for writing about abstract concepts and events, tools different than those needed in the contexts of his everyday speech.

The second issue, however, has more to do with Ryan as an abstractor, with his movement between what Bruner (1990) might refer to as narrative versus paradigmatic modes of thought (briefly, while narrative thought is concerned with the direct experience of actors in a context, paradigmatic thought is "scientific:" categorical, logical, and decontextualized - however, it is important to note that one type is not "better" than another, both are essential). In particular, one of the cognitive and linguistic challenges of paradigmatic or scientific forms of writing, especially with emergent writers, is its abstract nature. For example, although an image of a single cobra is spoken of and referred to (at one point a student literally rises and points to a poster of a cobra, see Appendix, 12-36 through 12-39), we understand this

to mean cobra as a category. Unlike a narrative, in which language is used to reference singular actors and events, we presume that in Ryan's text, the terms "cobra," "they," "it," and "his" are all intended to refer to the *species* cobra.

Thus, scientific writing relies on a type of thinking based on the qualities of general categories rather than on unique instances, actors, and events. This requires a control of the linguistic signals that cue such generalities. For example, the article "the" plays an especially important part in the nominalization central to scientific genres [what Bakhtin (quoted in Todorov, 1984, p. 18; see also Wells, 1996) dubs *thingification* - language through which we construct our relation to an object or idea versus *personification*, language through which we construct our relation to another identity or consciousness]. Five instances of "the" appear in the collaboratively edited text that do not appear in the initial draft. For instance, "His heads bigger..." is changed to "*The* heads bigger..." while "Cobra babies..." and "Cobra look nice" are revised to "*The* cobra babies..." and "*The* cobra look nice", respectively.

Collaboratively Edited Text. The text at the top of Figure 2 was the draft read orally to the group in the collaborative editing task. Finally, in the bottom text of Figure 2, we show the complete collaboratively edited text. A question that we asked was "How well was the group able to identify and address both the conceptual and the grammatical/syntactical ambiguities in Ryan's text?" Together, the group identified and corrected 13 of approximately 14 problems. If one considers that this group consisted entirely of students with language and learning disabilities, this seems a most complex linguistic task. Nonetheless, the group seemed to have considerable success in accomplishing it.[1]

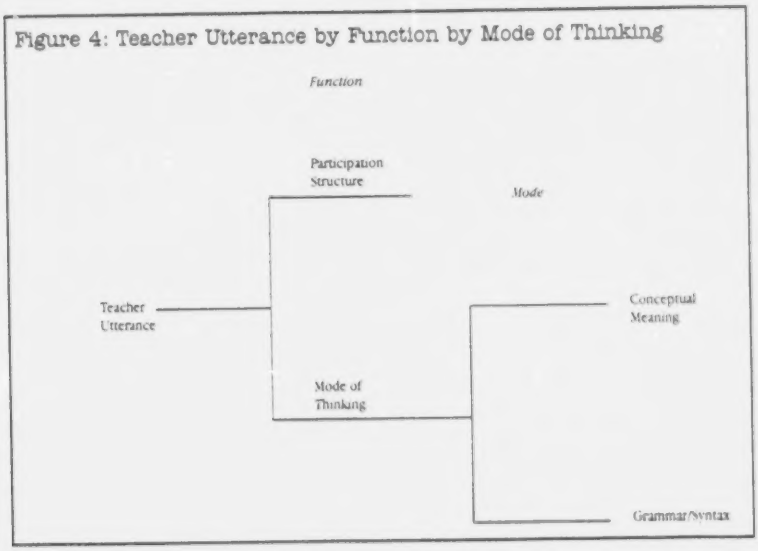
Analysis of Teacher Moves

Texts such as that at the bottom of Figure 2 are the goal of most school-based discourse, if not the function of literacy more generally—to provoke the development of more abstract, decontextualized forms of thought. We believe that the obvious differences between the texts at the top and bottom of Figure 2 are the effects of an educative process. Therefore, we sought to determine more precisely the nature of the teacher's participation in this process by conducting an analysis of teacher moves.

As shown in the schematic in Figure 4, two major categories of teacher moves seemed to emerge. The first of these seemed directed at the group's social *participation structure* (Schultz, Erickson & Florio, 1982)—the involvement of members, or "who says what and when," while the second major category seemed more toward the students' *mode of thinking*. These two major categories and examples are shown in Table 1. Further, it appeared that the *mode of thinking* category could be further divided into two subcategories. These consisted of comments directing students to either (a) the *conceptual meaning* of the text that students were attempting to edit, or, (b) the *grammar/syntax* required to express these concepts in a linguistically appropriate form. These subcategories and examples are shown in Table 2.

Approximately 59% of the teacher's moves were concerned with *participation structure* (see Table 1). These involved invitations to individual students or to the group to participate in the work of editing. This group of teacher utterances served a social function through coordinating what kinds of

Figure 4: Teacher Utterance by Function by Mode of Thinking



things were said, who said them, and to whom they were addressed. The most prevalent of these was opinion-seeking, utterances whose effect was to elicit input or decisions about text *([NOTE: the examples in this section can be found in the Appendix]* (e.g., "David? Whad'ya think? When angry spreads hood....?" *[see Appendix, round 6, line 6]*). Similarly, when the teacher deferred to the author or amplified the ideas of others ("Ohhh! How 'bout THE COBRA?"*[round 6, line 33]*), the effect was to turn ideas and comments back to either individuals or the group for consideration. In this manner, she pulled the group into dialogue, distributing responsibility for the cognitive work among the students through amplifying or revoicing ideas, redirecting the conversation to particular individuals in the group, and so on. The best metaphor for this might be that of an orchestra conductor who, although not composing the actual notes on the pages from which the musicians play, integrates them into a cohesive musical statement (although, given the spontaneity of these children, a producer of jazz music might be a more apt analogy).

At the same time, a second class of teacher utterances seemed directed toward the quality of student thought itself (see Table 2). Approximately 40% of her moves were of this type. Subdividing this type were two distinct foci of teacher talk (see Figure 4). One involved exploring the ideational or conceptual meaning of the text - "Yeah. It spreads its hood like that." *[round 6, line 45]* "Listen to me. Black and white eyeglass marking hood. What does THAT mean Ryan? Tell us." *[round 12, line 5]*. The other involved the grammatical/syntactical technicalities of expressing the meaning in a linguistically appropriate form (e.g., "They LIVES in Africa?" *[round 3; line 6]* "O.K. It's already got a period. But how does that *sound*?" *[round 6, line 8]*. "But listen to what the sentence is *saying*. Right? Listen. The cobra only snakes to build a nest..." *[round 9, line 3]*). For the most part, the teacher seemed to elicit student response to specific technical problems primarily through the following statement types: Initiating Doubt, Focusing Questions, and Leading. An interesting example of how the functions of teacher utterances were combined is the following, in which the teacher initiates doubt, defers to

Table 1: Teacher Discourse Moves in Ryan's Turn: Participation Structure

Participation Structure: Involving Students in Discouse and Decision Making Activity				
Move	**Function**	**Example**	**#***	**%†**
Opinion Seeking	Teacher (T) asks for input	What do YOU think? The cobra LIVE or the cobra LIVES? *[1-14]‡*	9	14%
Amplifying	T restates and puts back to group for further action	Ohhh! How 'bout THE COBRA? *[6-33]*	7	11%
Deferring to the Author	T turns to author for information or authorization of text	Whad'ya think, Ryan? They live IN? You want "they LIVE Africa?" *[3-8]*	7	11%
Revoicing	T simply repeats student contributions: no implication for further action	OK. We'll cross out "out of" and put "forty." *[7-36]*	6	9%
Encouragement	T supports student efforts	Good job, Al, good job. *[1-2]*	5	8%
Redirecting	T turns students to one another	I wasn't sure of this part. What do you think, Ryan? I see a hand up. *[5-7]*	3	5%
Directive	T uses authority to focus students on text	OK. Point to the words. *[1-3]*	2	3%

* Number of occurrences.
† Percentage of total teacher comments.
‡ Numbers in brackets following examples indicate location in full transcript (Appendix).

the author, then redirects him to another student—all within the span of three quick sentences.

> "I wasn't sure of this part [initiates doubt]. What do you think, Ryan? [defers to author] I see a hand up [redirects to others]."
> *[round 5, line 7]*

Together, the teacher's comments directed at the social process and those directed at students' modes of thought provided a range of discourse moves. The teacher orchestrated students' involvement in the monitoring and decision-making process but positioning herself more actively when students could not recognize or remedy the textual breakdowns. It could be argued that this continuum of moves reflects the emergent knowledge of students, ranging from moves that provided open invitations for students to take up the particular ways of thinking and writing associated with literacy acquisition and use in the community, to those that provided more guided apprenticeships in problem solving when students could not perform independently.

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Table 2: Teacher Discourse Moves in Ryan's Turn—Mode of Thinking

MODE-OF-THINKING: PUSHING STUDENTS IN PROBLEM SOLVING				
Move	**Function**	**Example**	**#***	**%†**
Initiate Doubt	Through intonation, gesture, or questions, teacher (T) signals the presence of a problem	*Conceptual Meaning* Ya wanna' put THEY? But then we won't know they're talking about the BABIES. *[8-5]‡* *Grammar/Syntax* They LIVES in Africa? *[3-6]*	11	17%
Focus Question	Questions used to direct attention to specific problems	*Conceptual Meaning* What does THAT mean: "Eyeglass marking?" *[12-11]* *Grammar/Syntax* OK. But how're we gonna say this sentence? *[12-31]*	9	14%
Leading	T reads partial text but pauses to invite students to finish the text construction	*Conceptual Meaning* It has a black and white eyeglass mark. . . [Pause follows by student explanation] *[12-51]* *Grammar/Syntax* It LOOKS like. . . [Pause] *[12-25]*	4	6%
Correct	T evaluates text	*Conceptual Meaning* [to author] I don't know where that came from. Do you know? [T moves on without waiting for reply] *[5-17]*	1	2%
Present Choice	T presents choice	*Conceptual Meaning* Should we put "lots" because we're not sure of the number? *[7-30]* *Grammar/Syntax* You said LIVES there instead of live? Does that sound better than live? *[1-12]*	2	3%

* Number of occurrences.
† Percentage of total teacher comments.
‡ Numbers in brackets following examples indicate location in full transcript (Appendix).

Discourse Analysis of Round 12: "Black and white eyeglass marking hood"

It was clear to us that during the moments of greatest textual ambiguity, when the text itself seemed to break down in terms of both meaning and grammar, the group was most active in its attempts to reconcile meaning and language. That is, the moments of greatest cognitive work seemed to

occur when neither what they were trying to say nor the linguistic means available for saying it were readily apparent. This was most obvious in the round involving the sentence, Black and white eyeglass marking hood (a full transcript of Ryan's turn is contained in the Appendix). This sentence refers to the fact that there are black and white markings on the cobra's hood and these resemble a pair of eyeglasses, although this was a difficult concept for students to articulate. In this round, 58 different contributions from the teacher and students were elicited—14 more than in the next highest round.

A transcription of Round 12 is presented in Figure 5 (references in this section will be to Figure 5). As indicated in the transcript, the round began with the teacher's use of focus questions and revoicings in an attempt to clarify the meaning of the sentence. By quieting students and redirecting them to listen to Ryan (the author), she creates a conversational space for Ryan, who seems somewhat reticent and unsure (12-5 through 12-15).

Figure 5: Transcript of Round 12*

	SPEAKER	CONCEPTUAL MEANING	GRAMMAR/SYNTAX	TEACHER MOVES
12-1	Teacher:	Black and...black and white eyeglass marking hood.		
12-2	Demanual:	Ooo!		
12-3	Tchr:	(listen to me) *[management]*		
12-4	Tchr:	Black and white eyeglass marking hood.		*REVOICE*
12-5	Tchr:	What does THAT mean Ryan? Tell us.		*FOCUS QUESTION*
12-6	Alex:	| It means that the SUCKer has eyes behind his back.		
12-7	Tchr:	What is that that's on his hood?		*FOCUS QUESTION*
12-8	David:	I know!		
12-9	Tchr:	Listen.		*REDIRECT*
12-10	Group:	*[inaudible]*		
12-11	Tchr:	Shh shh shh		*REDIRECT*
		What does that mean? Eyeglass marking.		*FOCUS QUESTION REVOICE*
12-12	Group:	*[inaudible]*		
12-13	Tchr:	What does that mean? Eyeglass marking. Do you remember? It looks like an eyeglass...on the back of his head...right?		*FOCUS QUESTION/ REVOICE*
12-14	Alex:	I know what it IS.		
12-15	Tchr:	Black and white eyeglass marking hood.		*REVOICE*
12-16	Ryan:	Eddie?		
12-17	Eddie:	Uhm...they're like:..uhm...glasses...		
12-18	Tchr:	| Emily?		*[50 sec pause] management*
12-19	Tchr:	OK. We need to finish his last sentence (boy we're runnin' out of time!)...Black and white eyeglass marking hood.		*REVOICE*
12-20	Group:	*[inaudible]*		
12-21	Alex:	Looks like glasses.		
12-22	Ryan:	I CALLED on Eddie!		
12-23	Tchr:	Oh! OK...Eddie?		*REDIRECT*

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Figure 5: Transcript of Round 12*

	Speaker	Conceptual Meaning	Grammar/Syntax	Teacher Moves
12-24	Eddie:	Umm...they're like little eyes in the ba:ck.		
12-25	Tchr:	It LOOKS like...		*LEADING*
12-26	Eddie:	eves and then the preda... yeah and then the predators...when they try to		
12-27	Tchr:	| | eveglass		*REVOICE*
12-28	Alex:	| See! There it is up there. Its a COBra.		
12-29	Eddie:	they attack that part...they think its the eves.		
12-30	Tchr:	| OK.		
12-31	Tchr:	OK. But how're we gonna' say this sentence? Its a black and white eye-glass marking...and where is it?		*FOCUS QUESTION/ LEADING*
12-32	Group:	Mmmm		
12-33	Group:	The back?		
12-34	Group:	The back!		
12-35	Tchr:	On the back of his...		*LEADING*
12-36	Alex:	Look at...		
12-37	Group:	| Head! *[in unison]*		
12-38	Tchr:	On the back of his head.		*REVOICE*
12-39	Alex:	| look at the picture up there.		
12-40	Tchr:	Oh ye::ah.		
12-41	Tchr:	So, what should we sa:y?		*OPINION SEEKING*
12-42	Alex:	*[inaudible]* in front of the head.		
12-43	Tchr:	Actually in the FRONT of its head, isn't it? So, what...how can we put the sentence?		*AMPLIFY OPINION SEEKING*
12-44	?	Uhmm...		
12-45	Alex:	It has /ashes/ in the back...		
12-46	Group:	*[inaudible]*		
12-47	Tchr:	Oh, it HA::S what?		*AMPLIFY/LEADING*
12-48	Group:	Uhhh...		
12-49	Alex:	| Ashes in BACK and the FRONT.		
12-50	?	| in front of		
12-51	Tchr:	| It has a black and white eveglass marking...		*REVOICE/LEADING*
12-52	Eddie:	In the front and in the back.		
12-53	Alex:	In the front in the back.		
12-54	Tchr:	| | in the... in the front of its hood.		*REVOICE*
12-55	?	mm-hmm		
12-56	Alex:	In the back.		

Figure 5: Transcript of Round 12*

	Speaker	Conceptual Meaning	Grammar/Syntax	Teacher Moves
12-57	Tchr:	Of...its...hood.		*REVOICE*
12-58	Tchr:	OK, Ryan, good job. You may go sit down. Who'd like to be next? We're gonna' have to go faster.		

*Transcription symbols for Figure 5 include | (overlapping speech), ... (pause), and : (elongated word). A single underline represents comments directed at the conceptual meaning of the text, while a double underline represents comments directed at the text's grammar and syntax.

Beginning in 12-11 and continuing through the next 29 interactions, Ryan struggles to explain himself in answer to the teacher's questions (e.g., "What does that mean? Eyeglass marking?"). At this point, the teacher directs students toward conceptual clarification of the text. Conforming to established social practices in the classroom, Ryan redirects the question to a peer, Eddie, who eventually provides a fuller explanation regarding the function of the cobra's markings:

> "They're like uhm...glasses"(12-16), Ummm...They''re like little eyes in the back (12-24), eyes and then the preda...yeah, and then the predators...when they try (12-26) they attack that part...They think it is the eyes" (12-29).

Eddie's halting style is a good example of what Barnes (1976) refers to as "exploratory" versus "final draft" talk. Exploratory talk is talk on the way to becoming a polished, finished text. It is essentially speech in what Vygotsky called "the gap" between thought and word (Vygotsky, 1986). That is, it is talk intended to tighten the breach between one's private ideas, on the one hand, and one's ability to linguistically express them, on the other: the difference between what we mean and how we say it. At the brink of this gap, speech suddenly loses its automaticity. Words themselves become an object of thought as we consciously attend to their function, what their possible meanings are, and how we can better use them in the service of our ideas and intentions.

Eddie's explanation helps the group to close this gap by explaining that the function of the cobra's markings is to deter predators who mistake them for the eyes of a much larger creature. Alex then rises and points to an actual picture of a cobra (12-36). This gesture concretizes the appearance and location of the "eyeglass markings" and, hence, the meaning of Ryan's originally cryptic sentence.

Only when the meaning has been clarified does the teacher then begin (12-25) to push the discourse toward the level of grammar/syntax and the repair of Ryan's original sentence. At this point, the teacher leads, amplifies, revoices, and opens the floor to further input. These moves seem especially important for preserving and building upon fragments of prior discourse, holding it in front of students for their elaboration or repair. From 12-43 onward, once clarity regarding the topic has been established, one can see the discourse shifting from the level of conceptual meaning (single underline) entirely to the level of grammar/syntax (double underline). The group now works toward an expression of this meaning in a linguistically suitable form.

In sum, the discourse analysis supports the previous functional analysis of teacher moves (Tables 1 and 2). As in this previous analysis, it appears that one group of teacher utterances served primarily to orchestrate the voices, variously foregrounding some and subduing others (including the teacher's own) in order to maximize students' contributions and ownership. At the same time, another group of utterances seemed directed toward the quality of students thinking, pushing students toward one of two levels of thought: a) the conceptual meaning of the text (e.g., "What does that mean?"); or, b) the grammatic/syntactic structure of the text itself (e.g., "So, what should we say?") (see Figure 4). In the transcript, we see that discourse in the service of clarifying meaning preceded discourse directed toward the appropriate grammatic/syntactic expression of that meaning.[2]

Viewing Session With Teacher

The teacher's remarks during the viewing session also seemed to confirm our broad division of teacher moves into those concerned with social participation structure and those concerned with students' mode of thinking. Regarding participation structure, it was apparent that she wished to create an environment in which students felt empowered to contribute rather than create a flawless final product:

> Hmm...it's the struggle in the give-and-take between the kids to get it to sound right...you have to have the whole situation. You have to have that acceptance of different opinions and you have to have the acceptance of some things not being right. You have to have that whole feeling that its OK to be wrong in the total classroom...

Similarly, the teacher's goal, as with all her literacy activities, was to foster productive discourse between the students through which they demonstrated not only a sense of community but an ownership of their learning. Thus, for her, one important aspect of creating this environment involved creating a public space for students' voices to be heard, where students could learn to work collaboratively.

> I wanted them to have the voice, the say, in what was going on in their writing but I also wanted them to have the opportunity to use the other kids' expertise and their understanding of things to improve the writing, versus just mine...I'm going to try and help as little as possible...I'm trying to push to get their language out...

Her remarks suggest a conscious motive behind the way she sought to orchestrate the group socially, including deferring to the author ("I wanted them to have the voice, the say in what was going on in their writing"), redirecting ("to have the opportunity to use the other kids' expertise"), and opinion seeking ("I also wanted them to have the opportunity to use ... their understanding of things to improve the writing, versus just mine.").

Regarding the promotion of students' mode of thinking, in order to access the language abilities of these students, some of them non-readers and non-writers, the teacher's interview suggests that she often appeals to their ears:

> I'm repeating it so they can hear what it sounds like.
> [See Figure 5: lines 12-1, 12-4, and 12-15, 12-19]

> I'm reiterating what they've written so they can listen to it see how it sounds... [See Figure 5: lines 12-25, 12-27, and 12-47]

> When [I repeat] "Its a black and white eyeglass marking," it doesn't sound quite right yet, so I was wanting them to think what it was... [See Figure 5: lines 12-31, 12-51, and 12-15, 12-19]
>
> I want them to hear the grammar and hear how it sounds.

In this way, the teacher uses students' oral language skills to pull them toward a perception of the text as a linguistic object in need of repair. That is, she attempts to revoice their ideas in a way that orally holds their language in front of them for their more critical evaluation.

Interpretation and Discussion

Mode of Thinking

In our analysis, we discerned between teacher moves aimed at the social processes of the group (participation structure) and those aimed more specifically at the quality of students' thoughts (mode of thinking). Within the latter group, we further discriminated between moves helping students to clarify conceptual meaning and those helping students move toward the appropriate grammatical/syntactical expression of these ideas. These data seem to reflect the basic process by which the teacher attempts to move students from the level of imagery and conceptualization to the more abstract level of putting their ideas into an appropriate linguistic form.

Interestingly, this movement seems to parallel a fundamental distinction between modes of thought made by a wide range of theorists. For example, Vygotsky (1986) distinguished between two different, but related, forms of thinking: spontaneous and scientific (p. 148). Somewhat comparable to Vygotsky's distinctions are the basic dualities of thought proposed by psychologist Jerome Bruner (1985—narrative versus paradigmatic), sociolinguists Halliday and Martin (1993—dynamic versus synoptic), and philosophers Rom Harre (1983—knowing as the "experiencing of something" versus knowing "structured according to grammatical forms""), Kenneth Burke (1989—poetic versus semantic), and Charles Taylor (1989—expressivist versus designative). Neglecting important differences between these theorists, it seems that a case can at least be made for two broad functions of language. In the first function, language serves to create or express while in the second function, language is used to refer to, or to represent, a preexisting reality.

Restricting ourselves to Vygotsky's terms, spontaneous thinking refers to thought that is personal, "empirically rich but disorganized" (Kozulin, 1986, p. xxxv), and rooted in the specifics of instances, images, and events. In this mode, "attention is always centered on the object to which [some] concept refers, never on the act of thought itself" (Vygotsky, 1986, p. 171). For example, as the teacher asks students: "What does that mean?", she attempts to elicit conceptual clarification of the topic. In this case, the object of thought is the the cobra.

What Vygotsky called scientific thinking, on the other hand, depends on the use of logically arranged categories. No longer rooted in the personal images

or details of immediate experience, thought deals primarily in abstractions: what is true for a concept is assumed to be generalizable across all instantiations of that concept. It is this latter type of thinking that school-based instruction is generally intended to move students toward. By asking students, "How do we say it?", the teacher attempts to focus students on the technical expression of their species-related ideas. In particular, she directs them to the "sound" of their words. In this case, the object of thought is no longer the snake or cobra., but the language mediating the communication of their ideas, especially its grammatical/syntactical features.

Breakdowns and Reflectiveness

A common feature of language practices, including writing, are the recurrent and inevitable "breakdowns" that occur. Returning to Vygotsky's notion of "the gap" between thought and word, language breakdowns represent the frustrated attempt to close the breach between our mental ideas and images, on the one hand, and our ability to translate these into a linguistic framework, on the other. Such breakdowns can occur privately, such as in the process of independent writing, or between persons, where the ability of another to interpret becomes a complicating factor. Negotiating these breakdowns usually requires a certain degree of conscious reflection regarding one's use of language.

The relationship between thought and word, especially in expository writing, represents an especially difficult interface for those with learning disabilities. Research into the metacognitive aspects of LD writers has found them to have particular difficulty reflecting on the mental processes involved (Graham, Schwartz, & MacArthur, 1993; Wong, Wong, & Blenkinsop, 1989).[3] Wong, Wong and Blenkinsop therefore claim that helping LD students become better writers must involve the fostering of metacognitive awareness (1989, p. 137). These data show that, as with any skill, it is often the breakdowns or imperfections (that is, our "mistakes") in our initial attempts to produce text that spark the most fruitful opportunities for learning, reflection, and the raising of awareness. As demonstrated, it is a teacher's role to both direct us toward and coach us out of such spots.

Contrasts With Non-Discursive Pedagogies

Transmission views of learning are a hardy and perhaps ingrained aspect of what Bruner refers to as our "folk pedagogies" (Bruner, 1996). A transmission view underlies the most prevalent classroom participation structure in American schools, that which Mehan (1979) refers to as Initiation-Reply-Evaluation (IRE). According to Cazden (1988, p. 29), this involves: a) The teacher initiates (I) a sequence by calling on a child to answer a question (to which the teacher typically knows the answer); b) The nominated child responds (R); c) The teacher evaluates (E) or comments on the response before calling on the next child. This type of instructional discourse continues to be the most prevalent pattern at all grade levels (Cazden, 1988; Nystrand, 1997). In fact, Nystrand (1997) writes, "Despite an apparent emerging consensus about the sociocultural foundations and character of literacy and classroom discourse, most schooling is organized, we found, for the plodding transmission of information through classroom recitation. Teachers talk, students listen. And the lower the track, we found, the more likely this is to be true (p. 3, italics added)."

It is significant, then, that the teacher moves depicted in Tables 1 and 2 depart from these traditional kinds of teacher-student exchanges. This teacher reports that her primary motive is to help students exercise their

authority in the revising process. She is sensitive to the moments in which students are able to assume the required social and cognitive tasks and strives to grant them control at such instances. At the same time, she is quite conscious of her role as a scaffold, supporting them when they lack the requisite knowledge or skills.

In a somewhat related vein, it should be noted that answers to authentic or "real world" problems are almost always more ambiguous than an IRE framework would imply. This is especially true in complex knowledge domains such as writing. In examining the full transcript, it was striking that there was no point at which the teacher appears to have explicitly provided students with "the right answer." Only 5% of the total teacher moves involved instances of evaluating the text or explicitly directing students to focus on it, whereas the remainder of her moves involved efforts to position students as active decision makers and problem solvers.

Such teacher moves might well serve to create the expectation that, as in the "real world," there are multiple answers rather than a single authoritative solution to the problems one faces (textual or otherwise), that problems are not static but dynamic, and that problems can be solved collaboratively rather than alone. This challenges the traditional view of teachers as arbiters of meaning and textual authority. Of course, we recognize that the teacher's executive authority was never totally absent; she continually exercised her prerogative through the voices she chose to amplify, the temporal pace she established, and her own implicit and explicit structuring of the activity.

Summary

This educator's approach stressed the importance of social interaction between student authors, peers, and teacher during the revision process. To promote this, she developed various discursive mechanisms to foster students' participation in discussions of both oral and written texts, viewing these student-to-student interactions a pedagogical tool in their own right. In this way, the teacher sought to apprentice students in ways of literate thought and action (see Rogoff, 1990). In her own words, "We have a room full of teachers!"

These analyses shed light on one student's "zones of proximal development" (Vygotsky, 1986), as represented by the differences between the text this student was able to achieve during independent writing conditions (e.g., journaling) and those texts which were produced when afforded other mediational tools (e.g., concept maps or instructional conversations with others). As a group activity, collaborative editing appeared to allow these students to perform at levels well beyond those at which they typically performed individually. At the same time, the teacher made active efforts to ultimately leave ownership of the text in the hands of the author. These data provide an example of one way that teachers can socialize students, especially those who are academically challenged, into the collaborative creation of texts.

Endnotes

[1]At the same time, it is important to acknowledge that questions regarding Ryan's status as an "abstractor" cannot be definitively answered on the basis of the revised text. For example, the group grammatically edits the sentence The cobra live in the desert by adding an "s" to live, supposedly to obtain subject-verb agreement. However, Ryan's intent regarding the subject remains unclear. Did he mean to indicate the species as a whole or, instead, an instance of a particular cobra (of course, we assume the species)? A similar question could be put to Cobra look nice, while the subject is less ambiguous in the sentence They live Africa. Although the latter is missing the prepositional "in", here we do feel safe in assuming that Ryan is referencing the cobra as a species.

[2] One would expect that a concept must first exist before it can be expressed. At the same time, one's choice of words turns back upon the shaping of concepts. Thus, the relationship between thought and speech, especially in the reflective act of writing, is a recursive one.

[3] Brown (1980) refers to metacognitive knowledge as that which involves "predicting, checking/self-monitoring, reality-testing, coordination and control of deliberate attempts to solve problems or to study and learn" (Brown, 1980, p. 454). Essentially, it is the taking of one's own thought processes as itself an object of thought [i.e., "cognition about cognition" (Garner, 1987, p. 16)].

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Appendix

Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

9:29:00	**INTRO**		
	Teacher:	..just like we were doing in morning message. And what I want you to do is listen...raise your hand for the group..for anyone in the group that has their..uh..raise your hand for the leader...and make your suggestions or comments about how we could make it sound better. O.K.? I'm gonna' trade chairs with whoever's turn it is..and I'm going to sit next to them and help them make corrections if they wa::nt. So what I'm asking you to do is talk quietly in front of you..don't touch your paper..don't touch your paper until its your turn. All right?	
		Uhmm..who'd like to be first?	*All students raise their hands. K selects Ryan. Ryan moves to chair. Students talk quietly among themselves*
		Ryan? Do you wanna' go sit in the chair?	
		You'll earn points by raising your hand just like in morning message..and you'll earn points by doing good listening..[to Brandon] Why don't I hang onto these so they won't be disturbing?	
	Brandon:	Noooo	
	Tchr:	Brandon?	
	Tchr:	Thank you, Brandon.	*Ryan sits back in chair, away from table. Others lean forward, elbows on table.*
		Good listening position. *[To Ryan]* Go ahead.	
	Ryan:	OK...and I'll read mine NOW?	
	Tchr:	Yeah...or I'll help you, or you can ask someone else to help you.	
9:30:56	**ROUND 1**		
1-1	Ryan:	The...cobra...	
1-2	Tchr:	| *[whisper]* good job, Al, good job...	
1-3		OK. Point to the words.	*to Ryan*
1-4	Ryan:	The cobra...	
1-5			
1-6	Tchr:	OK, you need to sit still... read.	
1-7	Ryan:	The COBra...likes...	
1-8	Tchr:	Live.	
1-9	Ryan:	in...the...desert.	
1-10	Tchr:	Let's read that one more time so they can hear you. I'll read it with you.	
1-11	Tchr/Ryan:	The cobra live in the desert.	*Tchr reads text with Ryan. Ryan says "lives" instead of "live." Alex raises hand.*
1-12	Tchr:	*[to Ryan]* You know you said LIVES there instead of live? Does that sound better than live? The cobra LIVES..does that sound better?	

Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

1-13	?	*[whisper]* Yesss.	
1-14	Tchr:	Whad'ya YOU think? The cobra LIVE or the cobra lives?	*to Demanual, touching his arm.*
1-15	?	| | /LI::VE/ |	
1-16		| It should—	
1-17	Demanual:	LI::VES.	
1-18	Tchr:	OK. Shall we add that 's' there?	*to Ryan. Members nod in assent.*
1-19	Tchr:	OK. (Demanual, please don't. *[management]*)	
1-20		The cobra...lives...in...the... desert.	*Tchr physically*
1-21		| | THE |	*edits the text.*
1-22		(desert).	
1-23	Tchr:	Help, Ryan.	
1-24	Ryan:	DESERT!	
1-25	Tchr:	Shhh... DESert.	
1-26	?Eddie:	Demanual has gum.	
9:31:56	**ROUND 2**		
2-1	Ryan:	*[reading]* The::y...	
2-2	?Demanual:	It's not gum...it CANdy.	
2-3	Tchr:	live... there...in...Asia.	
2-4	Ryan:	| live...there... in...	
2-5	Alex:	| /???your mouth/ *[to Demanual about candy?]*	
2-6	Tchr:	Excuse me, Ryan. Ted? You're supposed to come in and start your work.	*management*
9:32:13	**ROUND 3**		
3-1	Tchr:	They... live...Africa.	
3-2	?	| live...Africa.	
3-3	Alex:	Uhh!	*Alex's hand goes up, smiles. Ryan looks down at paper, then over at Alex.*
3-4	Tchr:	*[to Ryan]* I see a hand up.	
3-5	Alex:	*[to Tchr]* It should be LIVES in Africa.	
3-6	Tchr:	They LIVES in Africa?	*to Ryan. Rising intonation on "lives."*

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Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

3-7	Alex:	Lives IN...Africa.	
3-8	Tchr:	They Live IN? Whad'ya think, Ryan? They live IN? You want "they LIVE Africa?"	*to Ryan. no answer*
3-9	Alex:	(Live IN)	
3-10	Tchr:	They LIVE Africa?	*Looking out toward group.*
3-11	Alex:	Or they live IN.	
3-12	?	*/?/*	
3-13	Tchr:	/?talk about?/ *[management]*	*To Brandon, quietly w/stern expression.*
3-14	Tchr:	Whad'ya think, Ryan? Live Africa or live IN Africa.	
3-15	Ryan:	In.	
3-16	?	IN!	
3-17	Tchr:	/?/ You want IN? OK. Let's keep goin'.	
9:33:00	**ROUND 4**		
4-1	Tchr:	They...like.warm...parts...or...world.	
4-2	Alex:	Of THE::	
4-3	Tchr:	Of THE world? OK. We'll add "The."	*to Ryan*
4-4	Tchr:	Boy! Alex, you're doin' GREAT!	
4-5	Tchr:	Let's read the second paragraph. Ready?	
9:33:20	**ROUND 5**		
5-1	Tchr:	A...Cobra...is...	*in unison*
5-2	Tchr:	OK. You guys don't need to read. Just really listen and see if there's anything you could think of to change it. Ready?	
5-3	Tchr:	A cobra is longest...and...a...bee...	
5-4	Demanual:	Long AS...	
5-5	Tchr:	it...rears up when scared.	
5-6	Demanual:	| It!	*David, Alex raise hands, Demanual does not.*
5-7	Tchr:	I wasn't sure of this part. What do you think, Ryan? I see a hand up.	*Demanual lays head on table*
5-8	Ryan:	Eddie?	
5-9	Tchr:	A cobra is longest and a bee...it rears up when scared.	*Eddie looks at Tchr, seems unsure.*
5-10	Demanual:	AND!	
5-11	?Alex:	I know!	
5-12	Tchr:	OK. Eddie was called on,	*to Alex*
5-13	Tchr:	A cobra is longest? What do you think about that?	*to Eddie*
5-14	Demanual:	Lo::ng.	

Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word))

5-15	Tchr:	Its long? Do you want to say that?	*to Ryan*
5-16	Demanual:	Long AS!	
5-17	Tchr:	A cobra is lo::ng? D'ya wanna'...and...a bee? */to Ryan/* I don't know where that came from. Do you know? And a bee...it rears up when scared.	
5-18	?Group:	/long/	
5-19		It rears—	
5-20	Brandon:	It rears up when it IS scared.	
5-21	?	| a long snake	
5-22	Tchr:	Whad'ya think about that. It rears up when IT is scared. OK. So we should cross this part off, and we probably need...if this is the end of sentence we need a...	*to Ryan*
5-23	Group:	Period!!	*in unison*
5-24	Tchr:	And this needs to be a...	
5-25	Group:	Capital "I"!!	*in unison*
5-26	Tchr:	It rears up when...it...is...scared.	
5-27	Group:	| it...is...scared.	*in unison, all students on elbows looking down at text.*
5-28	Tchr:	Good, Brandon. Let's read the next one, all right?	
9:34:44	**ROUND 6**		
6-1	Tchr:	When angry speads hood.	*Tchr and group in unison*
6-2	Demanual:	Ooo! You didn't put /number one/	
6-3	Tchr:	| /?/... (thanks)	
6-4	Tchr:	Wanna' give David a turn? Please	*to Ryan. Ryan looks at Tchr, shakes head no. They smile at one another.*
6-5	Demanual:	| Then I /?/ 'TWOOO!	
6-6	Tchr:	Yes, please. David gets a turn. David? Wha'd'ya think? When angry spreads hood.	*to David*
6-7	David:	The::: period.	*to Tchr*
6-8	Tchr:	OK. It's already got a period. But how does that sound?	
6-9	Alex:	The co::bra	
6-10	Tchr:	| When angry spreads hood.	
6-11	Alex:	It spreads it /?/	
6-12	David:	| It don't sound too good.	*Eddie raises hand. Mumbles, students voicing alternatives (?)*

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Full Transcript

(Transcription symbols include | (overlapping speech), . . . (pause), and : (elongated word))

6-13	Tchr:	OK. Who's got some ideas? What should we do with it?	
6-14	Demanual:	| What do it say?	
6-15	Tchr:	When angry...spreads hood.	
6-16	Brandon:	When angry...SPRINGS.	
6-17	?Alex:	| *[softly]* /?/...spreads...hood...	
6-18	Tchr:	Eddie?	
6-19	Eddie:	Uhm...when...the SNA::KE...spreads hood.	
6-20	Alex:	But.../?/	
6-21	Tchr:	| OK. When angry...	
6-22	Group:	spre::ads hood.	
6-23	Tchr:	I thought cha' said "the SNAKE."	*to Eddie. Other student's begin to gaze elsewhere, Demanual talks to Alex.*
6-24	Eddie:	Yeah.	
6-25	Tchr:	When... the snake is...angry...	
6-26	Eddie:	| the snake... angry...it spreads hood.	*Tchr writes in the text.*
6-27	Tchr:	It spreads hood. How do you think, Demanual? Listen to Eddie.	
6-28	Tchr:	When...the snake is angry...*[slowly]* it sprreads hood.	
6-29	Eddie:	| the snake is angry... it spreads hood.	*Demanual and Alex have been talking. Tchr reaches over and gently turns Demanual's head.*
6-30	Tchr:	Ya' like that?	
6-31	Alex:	The cobra...	
6-32	Brandon:	| When the snake is ang...	
6-33	Tchr:	| O::h! How 'bout THE COBRA?	
6-34	Brandon:	The co-...when...when the cobra is angry...it...springs...*[releases breath in apparent frustration]*	*Brandon, head picked up, leaning forward on elbows, looking at text, speaking clearly and audibly*
6-35	Tchr:	| | | | | Yes?	
	Brandon:	When the cobra...is angry...it spreads...	
6-36	Brandon:	He said he was gonna poke me in the eye.	
6-37	Tchr:	Excuse me...it spreads...	

Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

6-38	Eddie:	its hood.	*pointing to Eddie*
6-39	Tchr:	It spreads hood?	
6-40	Eddie:	*/confidently/* Yeah.	
6-41	Tchr:	What d'ya think, Demanual? When the cobra is angry it spreads hood.	*rising intonation*
6-42	Demanual:	mmm...mmm	
6-43	Tchr:	D'ya like it? OK. Let's keep goin'.	
6-44	Alex:	It !ooks like...looks like its/spreadin' out the skin/	*Demanual sticks pen in his mouth, nods*
6-45	Tchr:	Help Ryan. */To Alex/* Yeah. It spreads its hood like that.	
		|	
9:36:25	**ROUND 7**	|	
7-1	Ryan:	Th::ey...they have	
7-2	Alex:	| It goes like sssssssss. It gets real mad.	
7-3	Tchr:	hatch...out...of...egg.	
7-4	Ryan:	out...of...egg.	
7-5	Tchr:	They hatch out of egg?	*rising intonation on "egg"*
7-6	Demanual:	*A* egg.	
7-7	Alex:	They hatch OUT of eggs.	
7-8	?Group:	| | | | Eggs! |	
7-9		| | | Eggs.	
7-10		| | | Out—	
7-11		| They hatch—	
7-12	Tchr:	| | eggs? They hatch OUT of eggs. Good!	
7-13	Eddie:	They ha—...they hatch out OF a egg.	
7-14	Demanual:	That's what I say.	
7-15	Alex:	They hatch it out OF...	
7-16	Demanual:	| No. They hatch *A* egg.	
7-17	Alex:	Eggsss.	
7-18	Tchr:	| They hatch OUT of eggs? Do they come /?/	
7-19	Demanual:	No, they hatch *A* egg.	
7-20	?	| | | Yeah.	*Brandon crawls underneath table*
7-21		eggs.	
7-22	Tchr:	Oh? Do they hatch just ONE egg?	
7-23	?Group:	No	

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Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

7-24		| No	
7-25	Demanual:	They...they...do, like, a hundred.	
7-26	?	| Thousands.	
7-27	Tchr:	Lots of 'em?	*rising intonation*
7-28	Ryan:	Four... FORTY	
7-29	Alex:	| They do like a hundred.	
7-30	Tchr:	Should we put "lots" because we're not sure of the number?	*to Ryan*
7-31	Ryan:	FORty!	
7-32	Tchr:	You sure?	*to Ryan*
7-33	Ryan:	Uh-huh.	
7-34	Tchr:	They hatch FORty eggs? Want THAT?	*to Ryan*
7-35	Ryan:	mm-hmm	*Brandon returns*
7-36	Tchr:	OK. We'll cross out "out of" and put "forty."	
9:37:15	**ROUND 8**		
8-1	Tchr:	Cobra...babies...ready to catch food.	*reading*
8-2	David:	/?/ The:::y...They ARE ready.	
8-3	Ryan:	YOU didn't raise your hand.	*to Demanual*
8-4	Demanual:	*[whisper]* Be quiet.	
8-5	Tchr:	Ya' wanna' put THEY? But then we won't know they're talking about the BABIES.	
8-6	David:	The:::y—	
8-7	?	| THE babies.	
8-8	Tchr:	(Sit right)	*management*
8-9		The cobra babies ready to hatch food. (Brandon thats a spend two) *[management]*	*Tchr tends to management issues. 15 sec.*
8-10	Tchr:	The cobra babies ready to catch food.	
8-11		What does that mean?	
8-12	David:	| READy to catch.	
8-13	Alex:	The cobras are read—...The baby cobras are ready to catch food.	
8-14	Tchr:	The...cobra...babies...ARE...ready to catch food.	*management*
8-15		(you need to listen)	
9:38:15	**ROUND 9**		
9-1	Tchr:	Ready? The cobra only snakes to build nest.	
9-2	Alex:	They build a nest out of...uhm...uhm...sand.	

Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

9-3	Tchr:	| But listen to what the sentence is SAYing. Right? Listen. The cobra only snakes to build nest.	
9-4	?	Sand!	
9-5	Ryan:	Cobras ARE.	
9-6	Tchr:	Oh. The cobras ARE...	
9-7	Ryan:	the only ones that know how to build a nest.	*softly*
9-8	Tchr:	Oh Good! The cobras are the only snakes that know HOW to build a nest. *[management]*	*[15 secs] all students' gaze on text or on Tchr*
9:39:10	**ROUND 10**		
10-1	Tchr:	OK. Let's try the last paragraph. Ya' ready? Cobra look nice.	
10-2	?Demanual:	Ooo!	
10-3	Alex:	The cobras	
10-4	?	| I know I know I know	
10-5	Tchr:	The cobras...look nice. |	*Tchr writes on the text*
10-6	Alex:	| look pretty nice.	
9:39:15	**ROUND 11**		
11-1	Tchr:	His head's bigger than a man's hand.	*to group*
11-2	?	/our hand/	
11-3	Tchr:	The head's...BIGGER...than a man's...HAND.	
11-4	Group:	| a man's...HANDS.	
11-5	Tchr:	Wow, that's a big head, isn't it?	
11-6	?	/So? Not even my dad/?//	
9:39:26	**ROUND 12**		
12-1	Teacher:	Black and...black and white eyeglass marking hood.	
12-2	Demanual:	Ooo!	
12-3	Tchr:	(listen to me) *[management]*	*Sternly, toward Demanual and Brandon.*
12-4	Tchr:	Black and white eyeglass marking hood.	
12-5	Tchr:	What does THAT mean Ryan? Tell us.	*to Ryan*
12-6	Alex:	| It means that the SUCKer has eyes behind his back.	*students' hands are raised*
12-7	Tchr:	What is that that's on his hood?	
12-8	David:	I know!	

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Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

12-9	Tchr:	Listen.	*looking at Ryan, subtly waving others off.*
12-10	Group:	*[inaudible]*	
12-11	Tchr:	Shh shh shh	
		What does that mean? Eyeglass marking.	*to group*
12-12	Group:	*[inaudible]*	
12-13	Tchr:	What does that mean? Eyeglass marking. Do you remember? It looks like an eyeglass...on the back of his head...right?	*to Ryan* *Ryan shrugs*
12-14	Alex:	I know what it IS.	
12-15	Tchr:	Black and white eyeglass marking hood.	*to group*
12-16	Ryan:	Eddie?	*Ruan scans group, selects Eddie.*
12-17	Eddie:	Uhm...they're like...uhm...glasses...	
12-18	Tchr:	| Emily?	
		[50 second pause]	*management*
12-19	Tchr:	OK. We need to finish his last sentence (boy we're runnin' out of time!)...Black and white eyeglass marking hood.	
12-20	Group:	[inaudible]	*Tchr glances at Ryan to select someone*
12-21	Alex:	Looks like glasses.	*to Tchr*
12-22	Ryan:	I CALLED on Eddie!	
12-23	Tchr:	Oh! OK...Eddie?	
12-24	Eddie:	Umm...they're like little eyes in the ba:ck.	
12-25	Tchr:	It LOOKS like...	
12-26	Eddie:	eyes and then the preda... yeah and then the predators...when they try to	
12-27	Tchr:	| | | eyeglass	
12-28	Alex:	| See! There it is up there. Its a COBra.	*Alex points to a poster of cobra on the wall*
12-29	Eddie:	they attack that part...they think its the eyes.	
12-30	Tchr:	| OK.	
12-31	Tchr:	OK. But how're we gonna' say this sentence? Its a black and white eyeglass marking...and where is it?	
12-32	Group:	Mmmm	
12-33	Group:	The back?	
12-34	Group:	The back!	
12-35	Tchr:	On the back of his...	

Full Transcript

(Transcription symbols include | (overlapping speech), ... (pause), and : (elongated word).)

12-36	Alex:	Look at...	*Alex stands up, walks over to picture of cobra and points*
12-37	Group:	| Head! */in unison/*	
12-38	Tchr:	On the back of his head.	
12-39	Alex:	| look at the picture up there.	
12-40	Tchr:	Oh ye::ah.	*leaning and looking back at picture*
12-41	Tchr:	So, what should we sa:y?	*turning back to group*
12-42	Alex:	[inaudible] in front of the head.	
12-43	Tchr:	Actually in the FRONT of its head, isn't it? So, what...how can we put the sentence?	
12-44	?	Uhmm...	
12-45	Alex:	It has /ashes/ in the back...	
12-46	Group:	[inaudible]	
12-47	Tchr:	Oh, it HA::S what?	
12-48	Group:	Uhhh...	
12-49	Alex:	| Ashes in BACK and the FRONT.	
12-50	?	| in front of	
12-51	Tchr:	| It has a black and white eyeglass marking...	
12-52	Eddie:	In the front and in the back.	
12-53	Alex:	In the front in the back.	
12-54	Tchr:	| in the... | in the front of its hood.	*rising intonation on "hood"*
12-55	?	mm-hmm	
12-56	Alex:	In the back.	
12-57	Tchr:	Of...its...hood.	*writing, descending intonation on "hood"*
12-58	Tchr:	OK, Ryan, good job. You may go sit down. Who'd like to be next? We're gonna' have to go faster.	

9:42:08

About CIERA

The Center for the Improvement of Early Reading Achievement (CIERA) is the national center for research on early reading and represents a consortium of educators in five universities (University of Michigan, University of Virginia, and Michigan State University with University of Southern California and University of Minnesota), teacher educators, teachers, publishers of texts, tests, and technology, professional organizations, and schools and school districts across the United States. CIERA is supported under the Educational Research and Development Centers Program, PR/Award Number R305R70004, as administered by the Office of Educational Research and Improvement, U.S. Department of Education.

Mission. CIERA's mission is to improve the reading achievement of America's children by generating and disseminating theoretical, empirical, and practical solutions to persistent problems in the learning and teaching of beginning reading.

CIERA Research Model

The model that underlies CIERA's efforts acknowledges many influences on children's reading acquisition. The multiple influences on children's early reading acquisition can be represented in three successive layers, each yielding an area of inquiry of the CIERA scope of work. These three areas of inquiry each present a set of persistent problems in the learning and teaching of beginning reading:

CIERA INQUIRY 1
Readers and Texts

Characteristics of readers and texts and their relationship to early reading achievement. What are the characteristics of readers and texts that have the greatest influence on early success in reading? How can children's existing knowledge and classroom environments enhance the factors that make for success?

CIERA INQUIRY 2
Home and School

Home and school effects on early reading achievment. How do the contexts of homes, communities, classrooms, and schools support high levels of reading achievement among primary-level children? How can these contexts be enhanced to ensure high levels of reading achievement for all children?

CIERA INQUIRY 3
Policy and Profession

Policy and professional effects on early reading achievement. How can new teachers be initiated into the profession and experienced teachers be provided with the knowledge and dispositions to teach young children to read well? How do policies at all levels support or detract from providing all children with access to high levels of reading instruction?

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